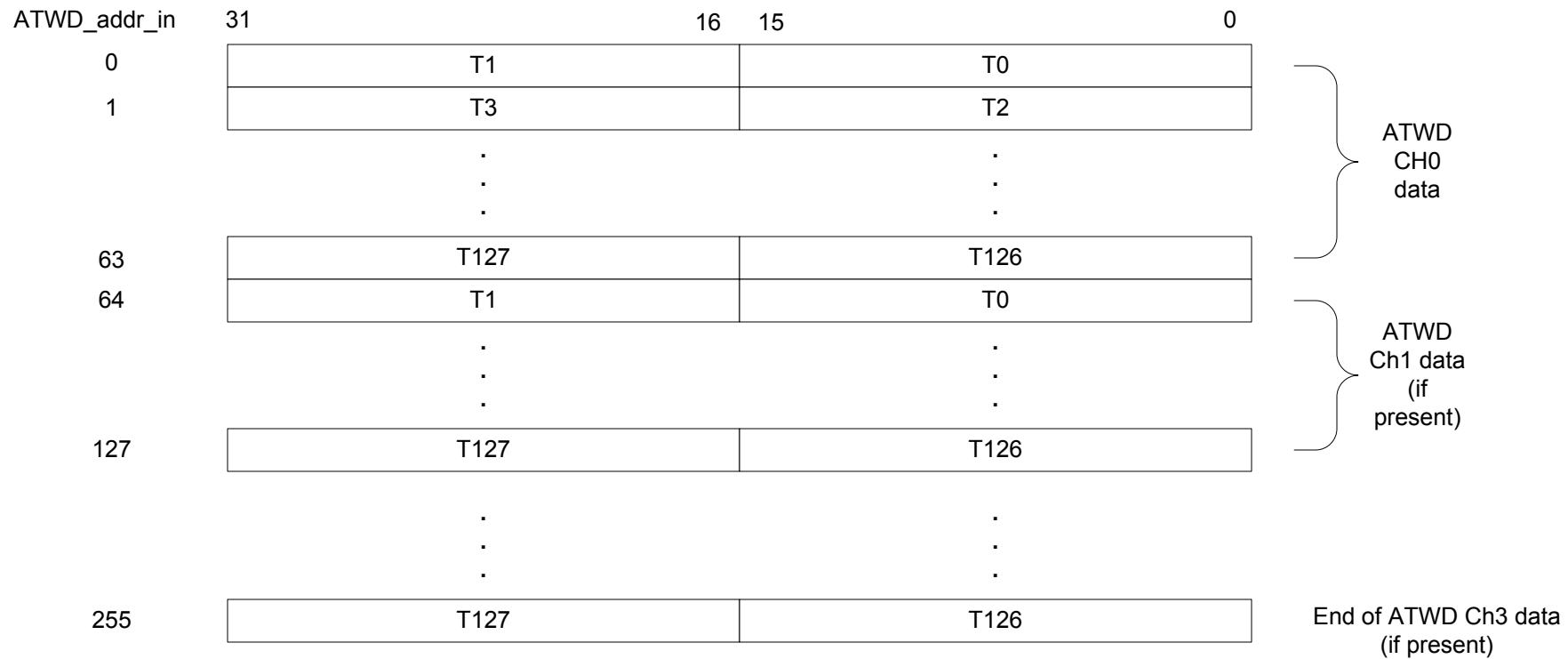
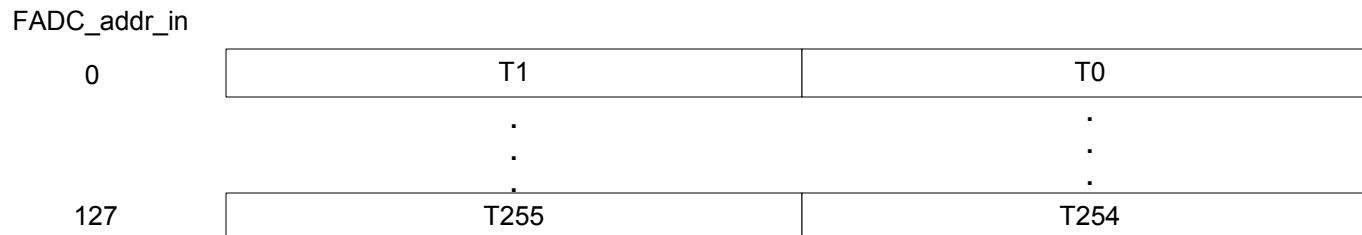


ATWD Data Format in the Input Buffer



FADC Data Format in the Input Buffer



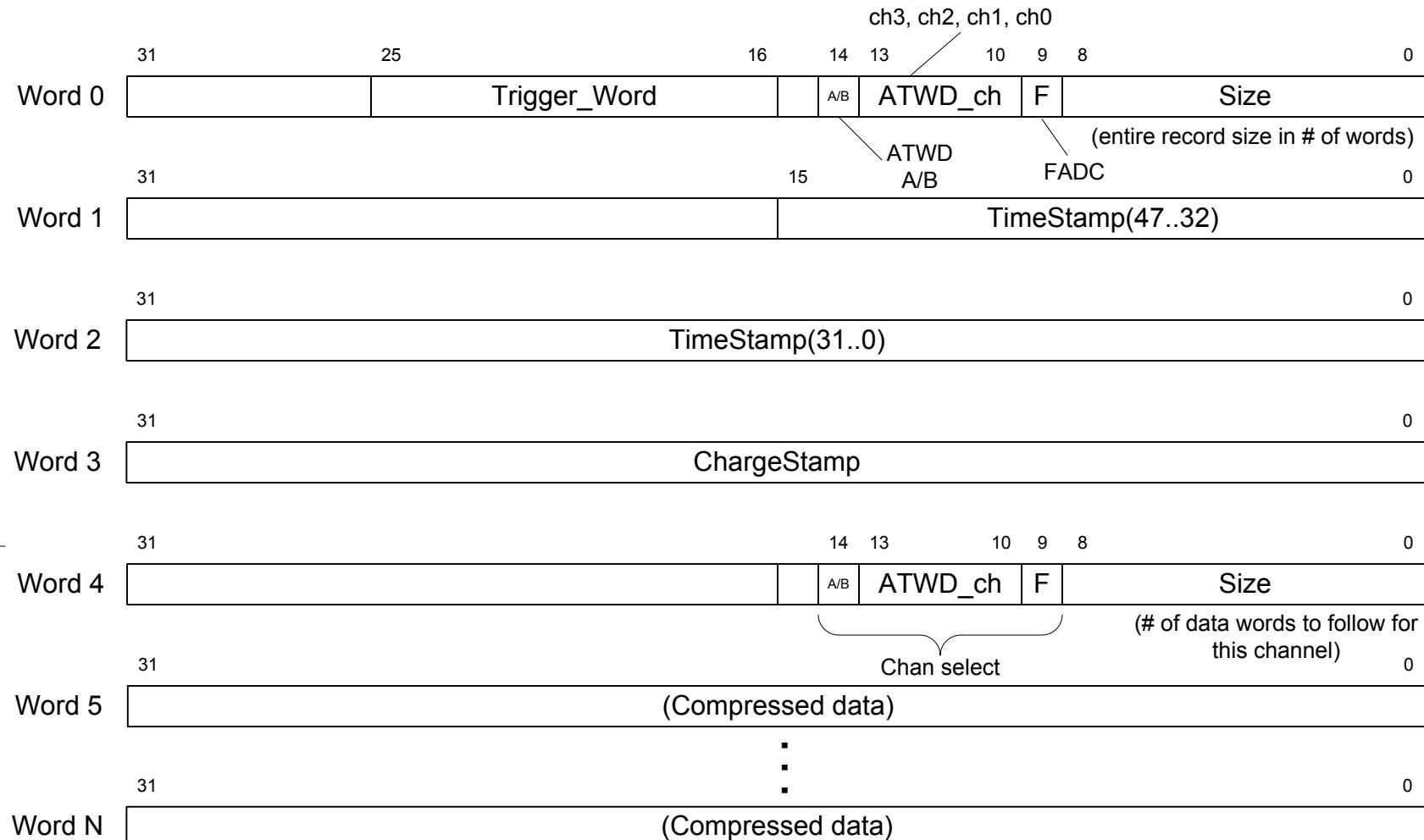
Note

Each Tn contains a pedestal-subtracted word in the format:



Compressed Data Header

(Contents of entity compr_ram)

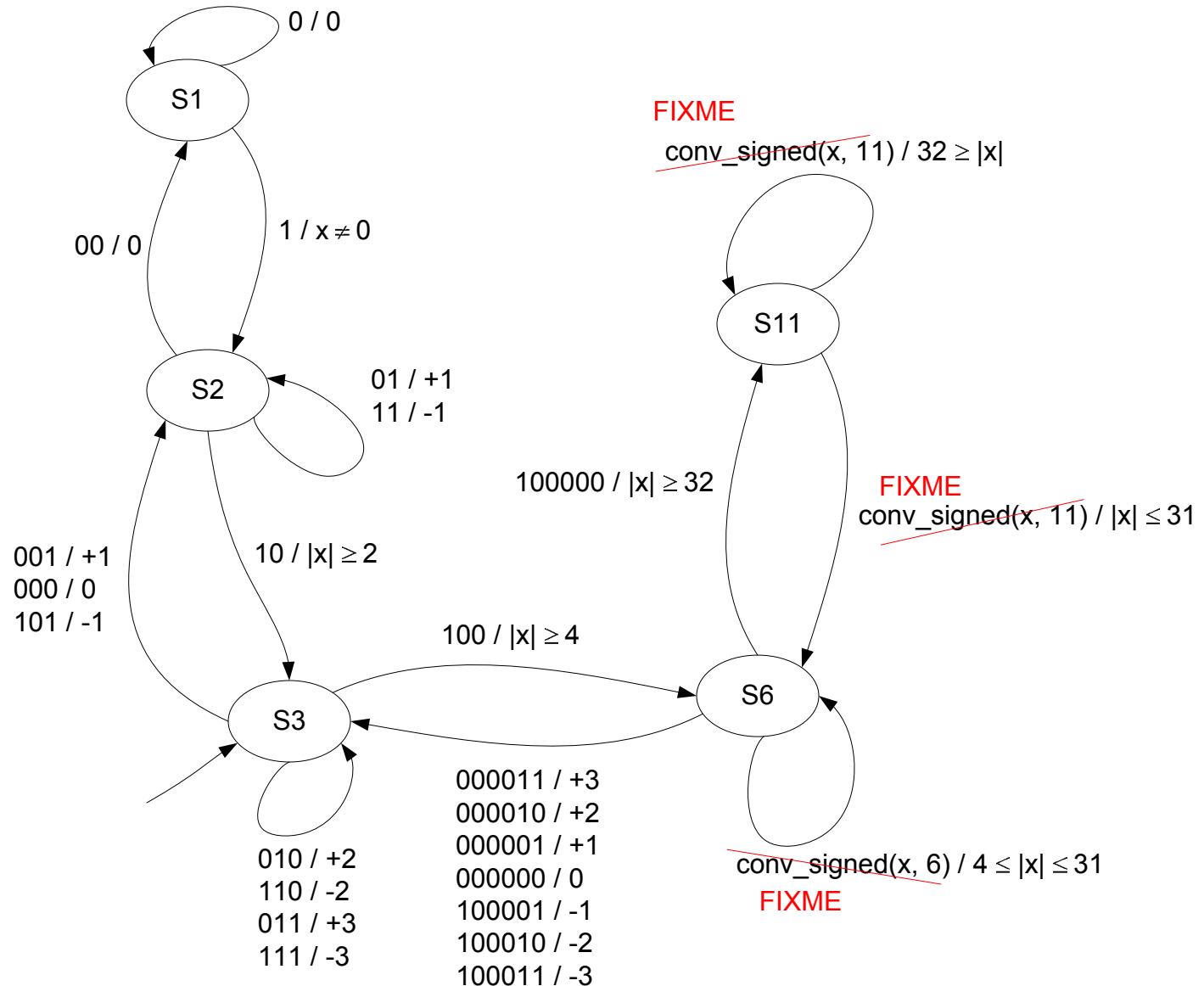


Repeat for all available data channels.

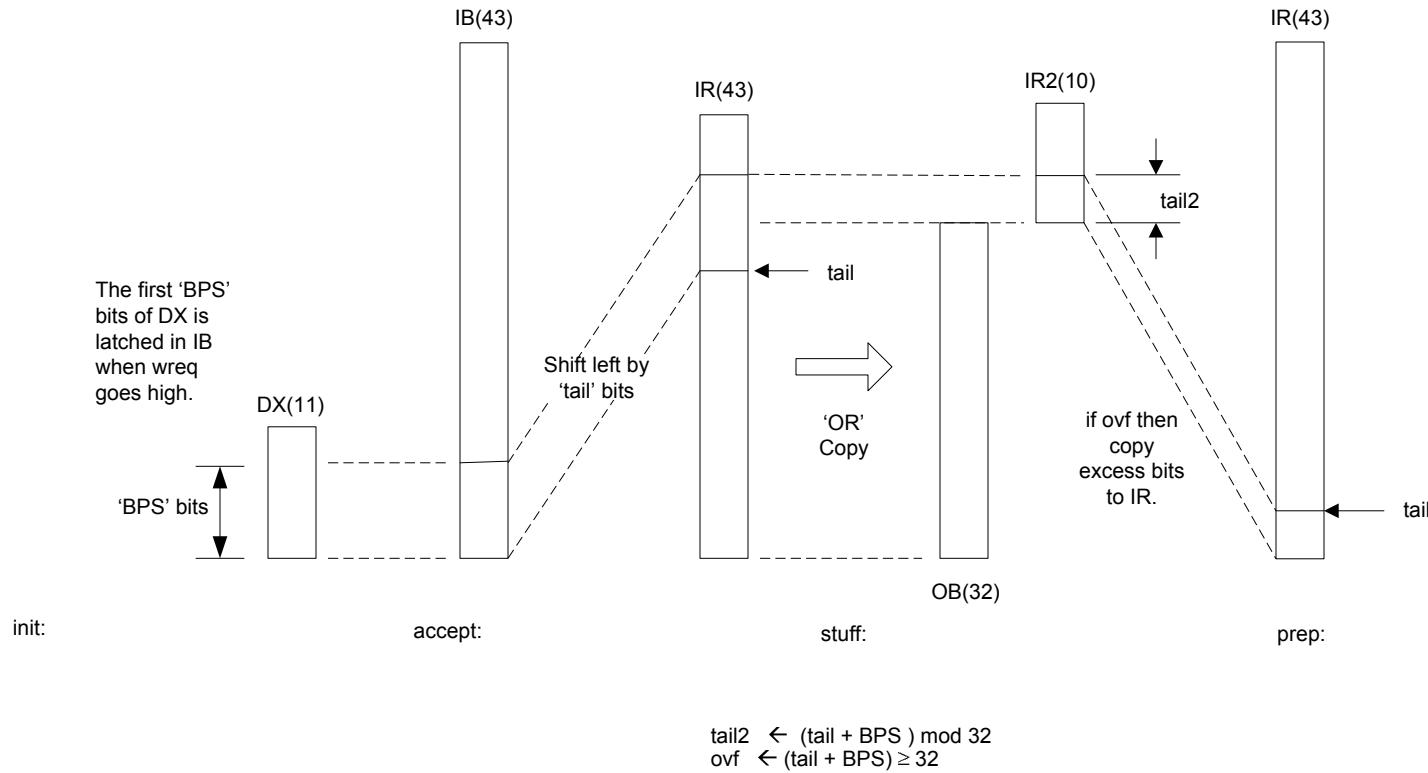
Thorsten says I should invent my own format. So here it is. Obviously this is not the tightest packing, but I assume the whole contents of the output ram will be digested by DOM software.

Word0 - Word3 are the header for the whole record.

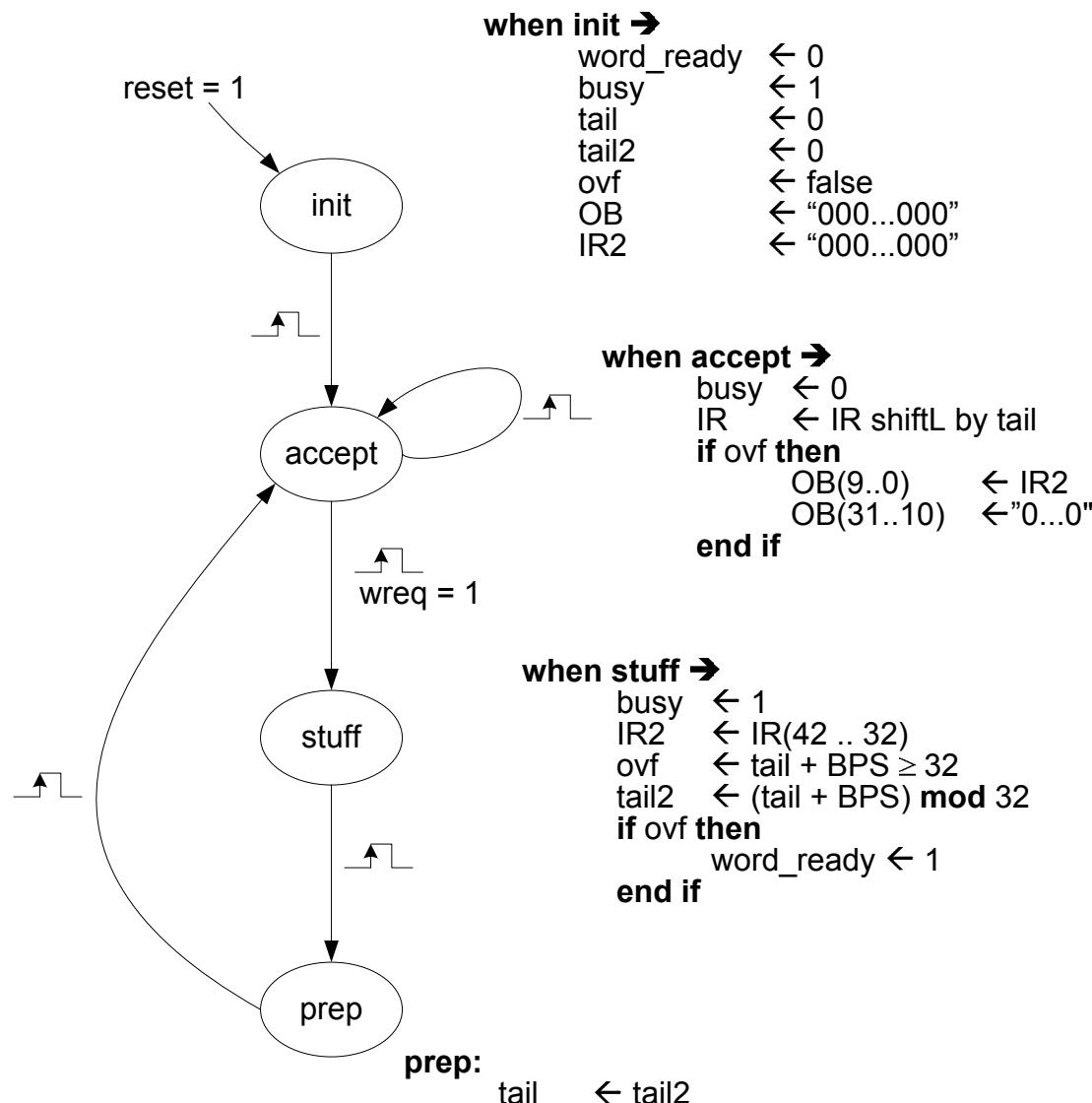
In addition, there is a header word for each channel immediately preceding the compressed data words.



This is the main
guts of loss-less
data compression
devised by Chris
Wendt.



The words digitized by DOM ATWD and FADC are encoded into various length depending on its value range. For each raw word, the encoded word DX and an integer value BPS are created. BPS indicates how many bits of DX contain meaningful data. The purpose of the entity bit_stuff is to pack the various-lengths words into a series of 32-bit words. See also the state diagram on the next page.



bit_stuff.vhd